UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,459	03/17/2004	Yuji Kouno	JP920010225US1	3997

7590 06/28/2005	**EXAMINER**
TIMOTHY O'SULLIVAN, ESQ.	JARRETT, SCOTT L
MYERS BIGEL SIBLEY AND SAJOVEC, P.A	

ART UNIT	PAPER NUMBER
3623	

TIMOTHY O'SULLIVAN, ESQ.
MYERS BIGEL SIBLEY AND SAJOVEC, P.A
4140 PARKLAKE AVE
SUITE 600
RALEIGH, NC 27612

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/802,459	KOUNO ET AL.
	Examiner	Art Unit
	Scott L. Jarrett	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some.* c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *5/9/2005*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is responsive to Applicant's amendment filed April 14, 2005.

Applicant submitted replacement drawings, amended the specification, amended claims

1-12 and canceled claim 17. Claims 1-16 are currently pending in this application.

Priority

2.   Acknowledgment is made of applicant's claim for foreign priority based on an

application filed in Japan on September 20, 2001 (JP 2001-287883). It is noted,

however, that applicant has not filed a certified copy of the foreign application as

required by 35 U.S.C. 119(b).

Examiner respectfully requests a translation of JP 2001-287883 as the patent's

teachings are essential to the examination of the present case.

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Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted on May 9, 2005 was filed

after the mailing date of the First Office Action on January 11, 2005. The submission is

in compliance with the provisions of 37 CFR 1.97. Accordingly, the information

disclosure statement is being considered by the examiner.

Examiner respectfully requests a translation of JP 06-332920, Hitachi Co., Ltd.,

(December 12, 1994) as cited in the International Preliminary Examination Request of

November 5, 2002, provided in the Information Disclosure Sheet submitted May 9,

2005, as the patent's abstract teaches the estimation (forecasting) of sales by shop,

sections (groups, regions, predetermined groups, etc.) and units (products, goods,

merchandise, etc.) making the patent's teachings essential to the examination of the

present case.

Response to Amendment

4.   Applicant's amendment filed on April 14, 2005 with respect to claims 1-17 has

been accepted.

Response to Arguments

5.   Applicant's arguments filed April 14, 2005 with respect to the rejections of claims

1-17 under USC 103(a) have been fully considered and are persuasive. Therefore, the

rejections have been withdrawn. However, upon further consideration, a new ground(s)

of rejection is made in view of Tenma et al., U.S. Patent No. 5,237,498 in view of Singh

et al., U.S. Patent Publication No. 2002/0169657 and further in view of Lam, Uncovering

the Multiple Impact of Retail Promotion on Apparel Store Performance (1998).

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 3-6, 8 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 3, claim 3 discloses that the sales forecasting system acquires "...a ratio of **the** commodity sales number..." Examiner is not clear as to the specific commodity sales number of the previously cited, at least two commodity sales numbers (commodity sales for a shop or commodity sales for a group of shops) the applicant is referring.

Examiner respectfully requests clarification as to which one of the previous claimed commodity sales numbers is being claimed as the invention.

Examiner interpreted the commodity sales number to mean either one or both of the previously disclosed commodity sales numbers (commodity sales for a shop, commodity sales for a group of shops or any combination thereof) for the purposes of examination.

Regarding Claim 4, claim 4 discloses that the sales forecasting system is configured to determine "...the forecast sales number of said commodity..." Examiner is not clear as to the specific forecasted commodity sales number of the previously

cited, at least two, forecasted commodity sales numbers (forecasted commodity sales

for a shop or forecasted commodity sales for a group of shops) the applicant is

referring.

The commodity sales number as claimed could be represented by at least the

following two equations. Examiner respectfully requests clarification as to which one of

the previous claimed commodity sales numbers is being claimed as the invention.

$$ForecastedSales\_Shop = f(historical\_data)$$

$$ForecastedSales\_GroupOfShops = f(historical\_data)$$

Examiner interpreted the commodity sales number to either one or both of the

previously disclosed commodity sales numbers (commodity sales for a shop,

commodity sales for a group of shops or any combination thereof) for the purposes of

examination.

Regarding Claim 5, claim 5 discloses that the sales forecasting system is

configured to determine several metrics (ratios, indices, numbers, values, etc.) wherein

the applicant claims that the system is "configured to calculate the forecast sales

number of said commodity at a predetermined shop on the basis of said **forecast

index**...." Examiner is not clear as to the specific forecast index of the previously cited,

at least two (forecast index of a shop or the forecast index of a group of shops), forecast

indices the applicant is referring. The commodity sales could be embodied by at least the following two equations, each a function of the forecast index.

$$Com\bmod itySales = f(ForecastIndex\_GroupOfShops, ForecastRatio, Visitors\_Shop)$$

$$Com\bmod itySales = f(ForecastIndex\_Shop, ForecastRatio, Visitors\_Shop)$$

Examiner respectfully requests clarification as to which of the forecast indices is being claimed as the invention.

Examiner interpreted the forecast index to be either one or both of the disclosed forecast indices (for a shop, for a group of shops) for the purposes of examination.

Regarding Claim 6, claim 6 discloses that the sales forecasting system utilizes an unspecified function to compare two ratios wherein the second ratio is a ratio of the forecasted commodity sales at a predetermined shop to the forecasted number of visitors. Examiner is not clear as to which forecasted number of visitors the applicant intends to claim.

Specifically the claim discloses at least two forecasted number of visitors metrics one for the forecasted number of visitors to a specific shop and the other the forecasted number of forecasted visitors to a group of shops.

Examiner respectfully requests clarification as to which one of the previously claimed forecasted number of visitors is being claimed as the invention.

Examiner interpreted the claim to mean that any commodity sales value (index,
metric, ratio, proportion, percentage, etc.) can be used to calculate the forecast ratio
(e.g. the average sales per customer, as disclosed in Claim 14).

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

9.   Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the

technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural

phenomena) that do not apply, involve, use, or advance the technological arts fail to

promote the "progress of science and the useful arts" (i.e., the physical sciences as

opposed to social sciences, for example) and therefore are found to be non-statutory

subject matter. For a process claim to pass muster, the recited process must somehow

apply, involve, use, or advance the technological arts.

Additionally, for a claimed invention to be statutory, the claimed invention must

produce a useful, concrete, and tangible result.

In the present case, claims 1-16 merely recite a method and system

configured to calculate several sales related values (metrics, ratios, proportions,

numbers, etc.) utilizing ordinary mathematical operations (division, multiplication, etc.).

The sales values are not utilized in any tangible, concrete or useful way such as using

the calculated values to determine required staffing levels for a store/group of stores,

benchmarking the performance of stores/groups of stores, determining the

success/performance of a specific promotional campaign, managing inventory to meet

future demand or the like. Therefore the claimed invention, as a whole, does not

produce a useful, concrete and/or tangible result and claims 1-16 are deemed to be

directed to non-statutory subject matter.

       Correction required. See MPEP § 2106 [R-2].

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

11.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tenma et al., U.S. Patent No. 5,237,498 in view of Singh et al., U.S. Patent Publication

No. 2002/0169657 and further in view of Lam, Uncovering the Multiple Impact of Retail

Promotion on Apparel Store Performance (1998).

12.   Regarding Claim 1, the computer-implemented commodity forecasting system as

claimed is merely **configured to** determine forecast sales for districts and shops,

however the system does not actually perform the calculations. For the purposes of

examination examiner assumes the applicant will amend the claim to recite that system

actually calculates the sales for districts and shops.

        Further the phrases "district sales number forecasting section" and "shop

sales number forecasting section" represent non-functional descriptive material since it

is obvious in light of the prior art and to one skilled in the art that where (in what section,

portion, subsystem, routine, code, segment, object, etc.) the calculations are performed

by the system or it's subsystems (components, sections, code, routines, etc.) does not

change the overall functionality of the system.

Tenma et al. teach a computer-implemented profit management system and

method wherein the system is configured to acquire, calculate, store and analyze profit

for each level (unit, division, district, store, organization, region, macro unit, geography,

etc.) information for a multi-level business, such as a retail chain, wherein the profit data

includes commodity (product, item, unit, good, etc.) sales at each level of the business

(e.g. for each shop/store in a group of shops within a predetermined district; Abstract;

Columns 13-18; Figures 4, 9, 11-12, 16 and 18a-18c; Equations 2-6). Tenma et al.

teach that profit and commodity sales are defined as (Column 4, Lines 1-15):

$$profit = com \operatorname{mod} ity\_sales - \cos ts \,,$$

$$com \operatorname{mod} ity\_sales = sellingprice\_product * no\_products\_sold$$

Tenma et al. further teach that the profit analysis is conducted for all levels

(districts, groups, sections, portions, etc.) of the multi-level business including but not

limited to: the entire business (headquarters), a group of stores, individual stores,

individual store sections (departments, groups, units organizations, etc.) and products.

Tenma et al. teach that the profit management system and method provides a plurality

of business performance information (data, metrics, values, numbers, etc.) including but

not limited to: number of products sold, product purchase price, commodity sales, point

of sales transactions and the like to various levels of management (Abstract; Column 1,

Lines 13-27; Column 2, Lines 55-67; Figures 2, 4, 18a-18c as shown below).

More specifically Tenma et al. teach a profit management system and method wherein commodity (service, product, good, item, unit, etc.) sales (number, volume, amount, value, etc.) are calculated for each shop (store, location, unit, outlet, etc.) within a group of shops within the business (district, region, area, division, geography, organization, etc.) comprising:

- calculating and displaying the hierarchical profit data, i.e. product sales for each level in the multi-level business (store, group, unit, store, group of stores, district, etc.; Column 4, Lines 42-56; Column 8, Lines 43-60; Column 13, Lines 14-53; Column 14, Lines 13-27; Figures 4, 16 Elements 771-776, 18a-18c as shown below);

- calculating individual shop section profit, sales and expenses by distributing (dividing, divvying, spreading, sharing, etc.) shop (store, district, group, etc.) commodity sales and sales to each section of the shop (store, location, etc.; Column 1, Lines 12-30 and 64-68; Column 2, Lines 1-11); and

- calculating shop sales by attributing shop product sales to each store based on the sales and other data retrieved (Figures 2, 4, 6 as shown below).

F I G.   2
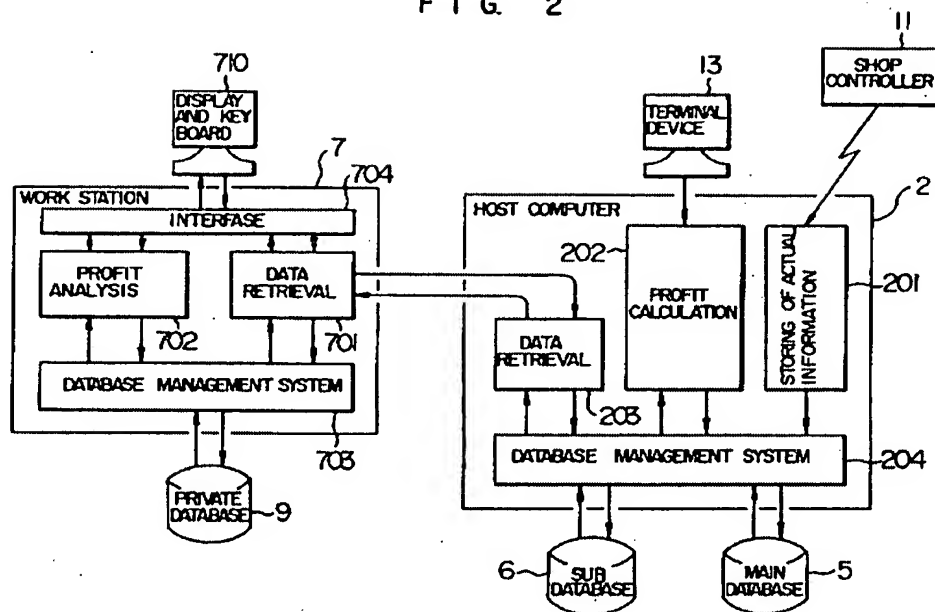
Figure 1: Tenma et al., Figure 2

F I G.   16
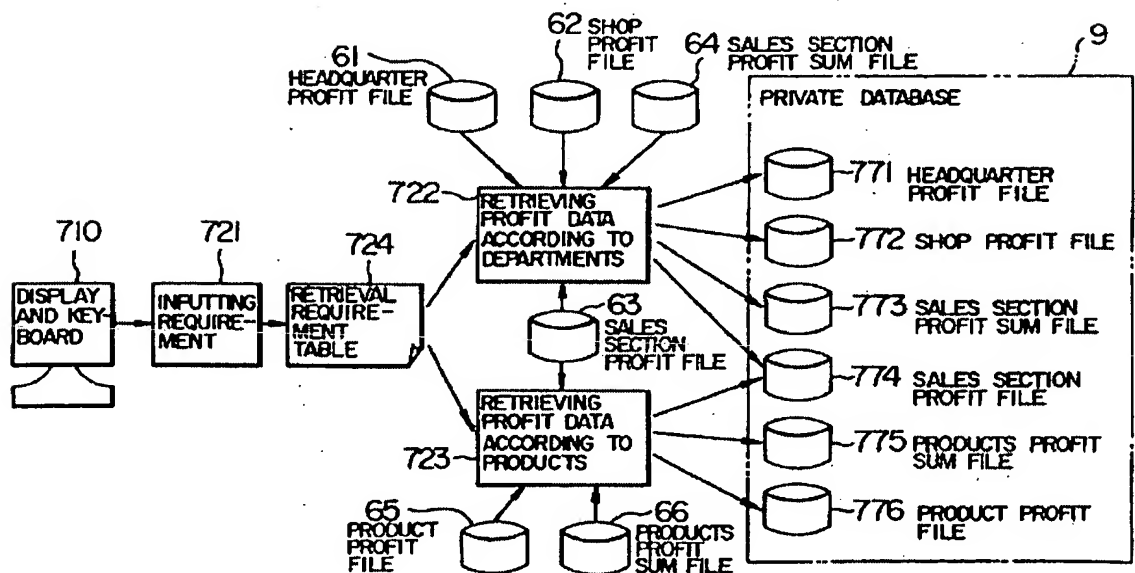
Figure 2: Tenma et al., Figure 16

F I G. 18a


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                                    ┌710
┌─────────────────────────────┐
│WHAT KIND OF RETRIEVAL ?      │
│                              │
│ I. ACCORDING TO DEPARTMENTS  │
│ 2. ACCORDING TO PRODUCTS     │
│                              │
│ SELECT ONE OF THE TWO        │
└─────────────────────────────┘
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F I G. 18b


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┌──────────────────────────────┐
│ PERIOD ?                      │
│  __/__/__~__/__/_             │
│ RANGE ?                       │
│  I. ALL  SHOPS                │
│  2. SPECIFIED SHOP            │
│   NAME OF SHOPS:_ _ _ _ _     │
└──────────────────────────────┘
              └
               710
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F I G. 18c


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                              ┌710
┌─────────────────────────────┐
│ PERIOD ?                     │
│  __/__/__~__/__/__           │
│ RANGE ?                      │
│   NAME OF SALES COUNTER :    │
│   _ _ _ _ _ _ _ _ _          │
│   I. ALL  SHOPS              │
│   2. SPECIFIED SHOP          │
│   NAME OF SHOP:_ _ _ _ _      │
└─────────────────────────────┘
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F I G. 18d

Figure 3: Tenma et al., Figures 18a-18c

F I G.   4

Figure 4: Tenma et al., Figure 4

Tenma et al. does not expressly teach that the profit management system

forecasts business metrics or that the business (e.g. retail chain and it stores) engages

in promotional activities.
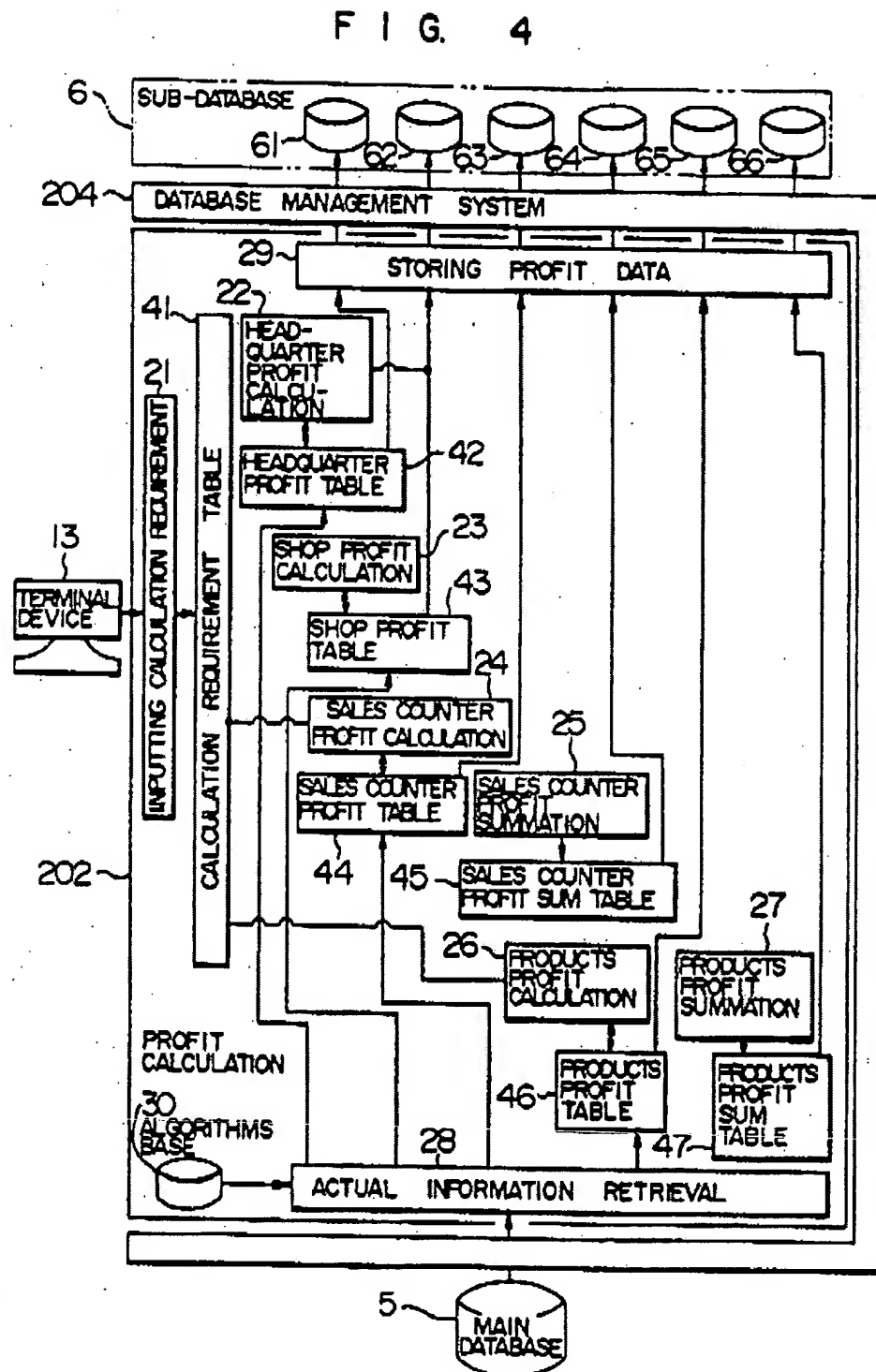

Singh et al. teach a sales/demand forecasting method and system wherein

members of the supply chain (multi-level business) utilize promotional activities

(Abstract), in an analogous art of business management, for the purposes of proactively

forecasting and planning of sales/demand across multiple levels of a supply chain

(multi-level business; Paragraph 0002).

More generally Singh et al. teach a system and method for predicting future

customer demand (sales) by enabling multi-level businesses to understand customer

demand drivers (e.g. promotional activities) and to utilize the insights gained to

unify/optimize the supply chain planning process (Paragraph 0028).

Singh et al. further teach that the demand forecasting and planning system

further comprises:

- the ability to forecast demand across multiple levels of the supply chain

(Paragraph 0002) including but not limited to geographical regions (districts) and

individual stores (Paragraph 0024, 41-42; Figure 1);

- the ability to forecast demand for products across the entire supply chain

(business), within each level of the supply chain (Paragraph 0019);

- the utilization of a plurality of factors effecting demand including but not limited

to: causal factors (promotions, new market/product, competitor actions, etc.), buying

trends, time, demand history and seasonal effects (Paragraphs 0007, 0023, 0035, 0055;

Equations 1-4; Figures 4A-4C, 5);

- the utilization of a plurality of data sources including but not limited to point of

sales, customer orders, returns, etc. (Abstract; Paragraph 0021); and

- the ability to utilize a plurality of well-known or proprietary demand forecasting

algorithms, techniques, methods, etc. (Paragraph 0021; Figure 2).
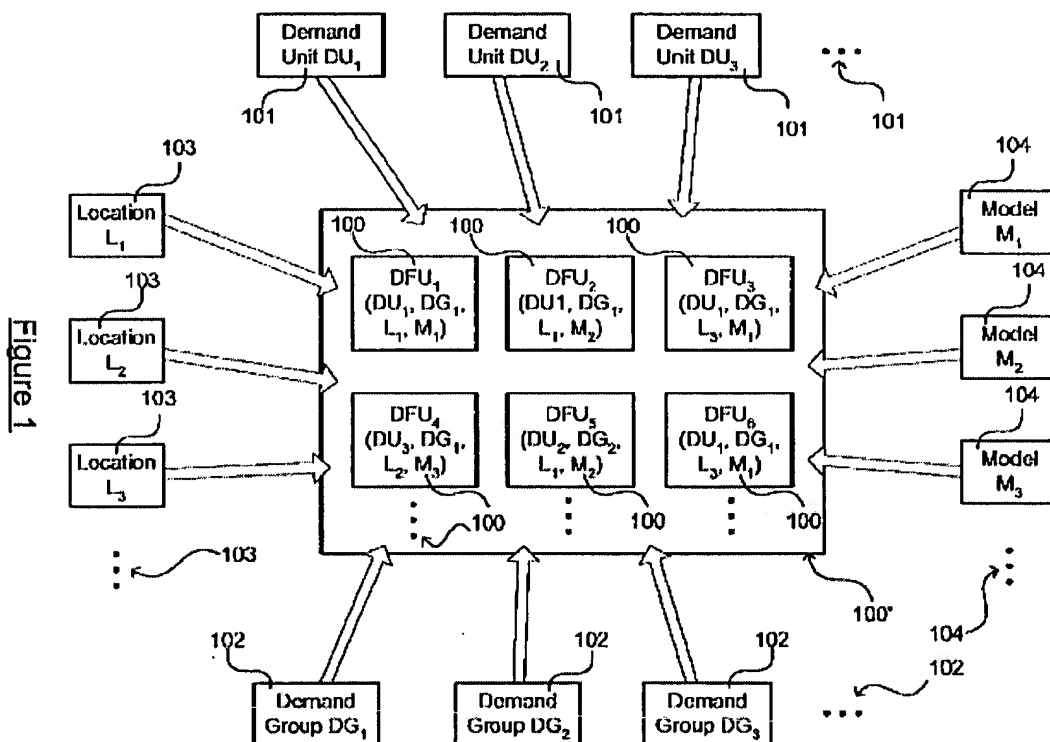
Figure 5: Singh et al., Figure 1
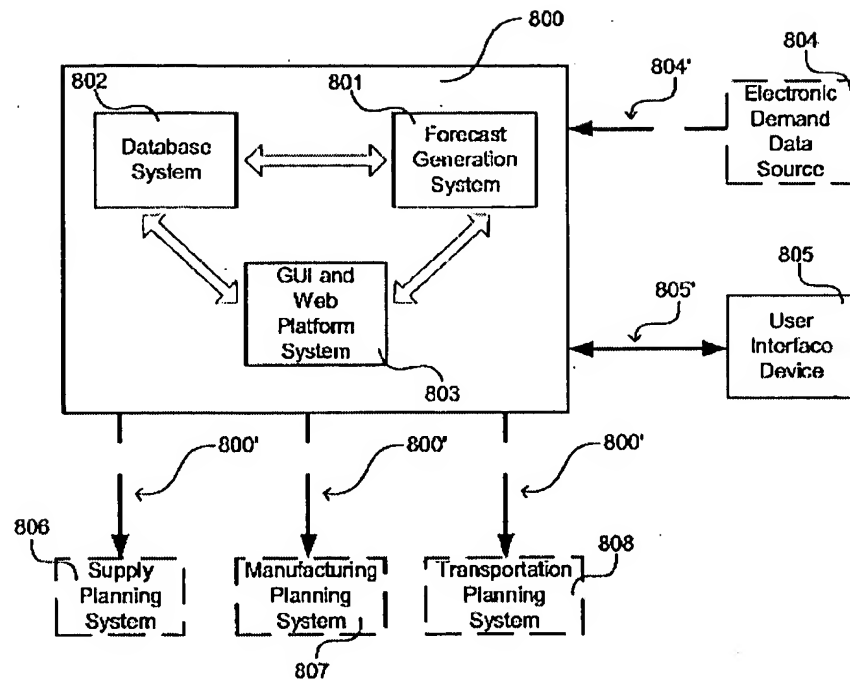
Figure 6: Singh et al., Figure 8

It would have been obvious to one skilled in the art at the time of the invention

that the profit and performance management system, with its ability to collect, analyze

and report on business performance information, as taught by Tenma et al.; would have

benefited from forecasting a plurality of business performance metrics (sales, demand,

profit, etc.) in view of the teachings of Singh et al.; the resultant system enabling multi-

level businesses more efficiently plan and manage the business strategies by

enhancing the systems information to include forecasted sales (demand) and profits

(Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Lam teaches the well-known use of marketing (promotions, advertising) in retail

stores, in an analogous art of store/business management, for the purposes of

analyzing the effects of promotional activities (signage, store layout, advertising, etc.) on

store performance (e.g. profit; Pages 1, 5, 14). Lam further teaches that the importance

and impact of promotional activities (e.g. a store, group of stores and/or businesses

performing sales promotional activities via a plurality of advertising medium - television,

newspaper, Internet, radio, billboard, etc.) on businesses is old, well-known and widely

studied. Lam teaches that the forecasting of store performance metrics (sales, traffic,

volume, etc.) enables store managers to forecast/plan such things as staffing needs

(Page 28).

Lam teaches that the method utilizes well-known store performance metrics and

data including but not limited to: store sales, traffic (visits, number of customers),

transactions, average spending per customer; average transaction size (average

purchase size; average spending per visitor, etc.; Page 4), product sales, attraction

rate/effect, conversion rate, closing ratio, product category sales and the like (Page 20-

23, 70-71; Figures 2-3; Table 3). Specifically Lam teaches that the average spending

per customer (e.g. sales/forecast index/ratio/proportion) is defined as:

$$average\_spending = \frac{storeSales}{numberOfTransaction} \text{ (Eq. 3, Page 21)}$$

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).
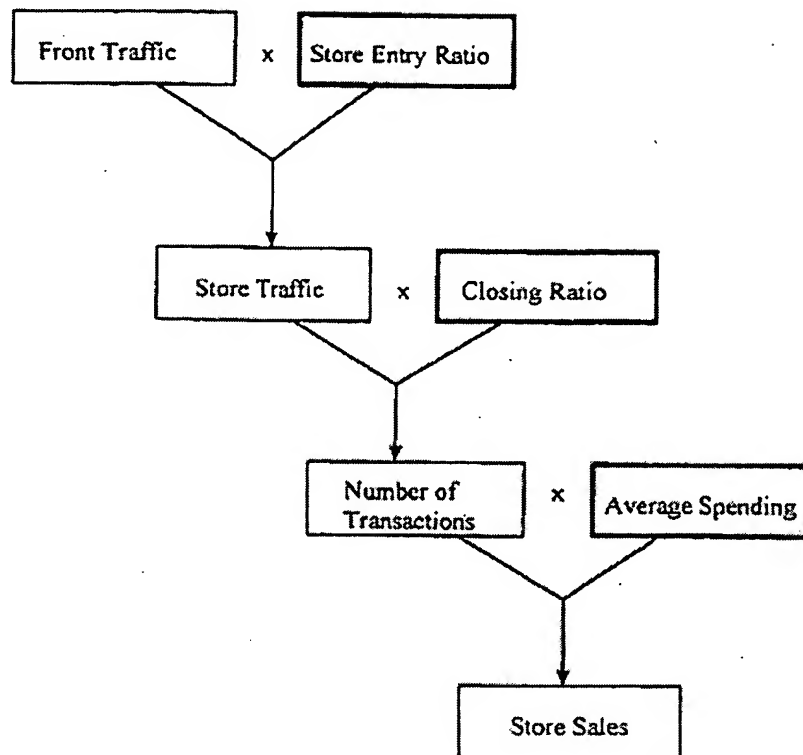
Figure 7: Lam, Figure 2, Page 23

It would have been obvious to one skilled at the time of the invention that the profit management system and method, with its ability to collect, analyze, forecast and report on a plurality of business performance metrics, as taught by the combination of Tenma et al. and Singh et al. would have benefited from including in its profit analysis and forecasts data related to the promotional activities of the plurality of stores, groups of stores and/or an entire business in view of the teachings of Lam; the resultant system providing additional insight into the performance (e.g. profit) of the stores/business being analyzed as well as enhancing the data utilized for business planning/management purposes (Tenma et al.: Column 3, Lines 55-60).

13.   Regarding Claim 2, the computer-implemented commodity forecasting system as

claimed is merely **configured to** determine a forecast sales ratio and a forecast sales,

however the system does not actually perform the calculations. For the purposes of

examination examiner assumes the applicant will amend the claim to recite that system

actually calculates the forecast sales ratio and forecast sales.

Further the phrases "district ratio calculating portion" and "district sales number

portion" represent non-functional descriptive material since it is obvious in light of the

prior art and to one skilled in the art that where (in what section, portion, subsystem

routine, code, segment, object, etc.) the calculations are performed by the system or it's

subsystems (components, sections, code, routines, etc.) does not change the overall

functionality of the system.

Tenma et al. teach a profit management system and method wherein the system:

- calculates the sales/profit for each of a plurality of stores, group of stores,

levels, etc. as discussed above;

- calculates the sales/profit for the entire business (headquarters) based on the

sales/profits at the plurality of stores, group of stores, organization, levels, etc. (Column

4, Lines 1-56; Columns 13-16; Figures 4, 18a-18c); and

- compares the sales/profit of the products sold in order to identify "good sellers

and bad sellers." (Column 3, Lines 54-59).

Tenma et al. does not expressly forecasting business performance metrics, calculating a sales ratio or calculating the commodity sales for a group of shops using commodity for a shop and a sales ratio as claimed and shown below:

$$SalesRatio = \frac{\left(Total\_Com\,\mathrm{mod}\,itySales\_ForAShop\right)}{\left(Total\_Com\,\mathrm{mod}\,itySales\_ForGroupOfShops\right)}$$

$$Com\,\mathrm{mod}\,itySales\_ForGroupOfShops = f\left(TotalCom\,\mathrm{mod}\,itySales\_ForAShop, SalesRatio\right)$$

Note: The functional notation utilized in the above equation should be interpreted to mean "The commodity sales for a group of shops is an (unspecified) function of the total commodity sales for a shop and the sales ratio." The term function should be interpreted to mean any of the following: a relationship, procedure, formula, method or the like involving the subject (output, result, left hand side of equation) and the inputs (the right hand side of the equation).

Singh et al. teach a sales forecasting method and system wherein members of the supply chain utilize promotional activities (Abstract), in an analogous art of business performance management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002).

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a

plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught

by Tenma et al.; would have benefited from forecasting a plurality of business

performance metrics (sales, demand, profit, etc.) in view of the teachings of Singh et al.;

the resultant system enabling business to more effectively plan and manage their

business by anticipating demand (e.g. forecasting sales and their impact on the

business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach calculating the sales ratio or the commodity

sales for a group of shops as a function of the commodity sales of a shop and the sales

ratio as claimed and shown above.

While both Tenma et al. and Lam teach the comparison of sales data (e.g.

product sales, store performance, etc.) as discussed above neither Tenma et al. nor

Lam expressly teach calculating a sales ratio or the commodity sales for a group of

shops as a function as claimed and shown above.

Official notice is taken that the two calculations (equations) as claimed represent

a **single** equation/calculation wherein one can readily convert/transform from one form

of the equation into the other form of the equation utilizing basic mathematical

operations (division and multiplication) as shown below:

$$(TotalCom \bmod itySales\_ForGroupOfShops) = \frac{(TotalCom \bmod itySales\_ForAShop)}{SalesRatio}$$

alternatively written as:

$$Com \bmod itySales \_ ForGroupOfShops = f(TotalCom \bmod itySales \_ ForAShop, SalesRatio)$$

i.e. the function calculates the forecasted commodity sales (number, figure, amount, etc.) for a group of shops (advertising unit) using the total commodity sales per shop (within the group) and the sales ratio.

Official notice is taken that it is old and very well-known to calculate the a ratio wherein the (sales) ratio (proportion, percentage, index, fraction, etc.) represents the contribution (past, present, future) of a part to a whole; more specifically the sales contribution of a specified part (e.g. a single store, group of stores, division, person, etc.) of the business to the overall performance (e.g. profit, sales, etc.) of a business or group of businesses as evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit, Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business Segment or Unit; Pages 35, 41-44);

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75); and the following examples:

- Example one, it is a common business management practice to set sales quotas for a division of a company based on forecasted sales wherein the division's performance is rated on its achievement (attainment, performance) of the sales quota

wherein the sales quota is a ratio of the division forecasted sales to the overall

businesses sales.;

   - Example two, it is common business practice to compare the performance of

one or more retail stores in a retail chain based on geography/location, product mix, etc.

wherein the a sales ratio is calculated to determine (compare, contrast) the

expected/forecasted percentage contribution or relative performance of an individual

shop's sales (area, region, location, site, unit, division, etc.) to the sales of a group of

shops (advertising unit, group, district, division, etc.); alternatively the sales ratio

expressed as:

$$SalesRatio = \frac{(Total\_Com\bmod itySales\_ForAShop)}{(Total\_Com\bmod itySales\_ForGroupOfShops)}$$

The sales ratio providing valuable insight into the relative performance of stores

or the expected performance/quota for a store (unit, region, area, location, division, etc.)

and enables the store/business to plan staffing, inventory and other business functions

and resource requirements in anticipation of the forecasted sales.

It would have been obvious to one skilled in the art at the time of the invention

that the profit management system, with its ability to collect, analyze, forecast and

report on a plurality of business performance metrics (e.g. commodity sales, profits,

etc.), as taught by the combination of Tenma et al. and Singh et al.; would have

benefited from forecasting a plurality of business performance metrics (sales, demand,

profit, etc.) including the calculation of a sales ratio and forecasted commodity sales; the resultant system enabling the multi-level business to more effectively plan and manage each level (store, shop, group, division, unit, district) of their business by forecasting demand and setting business performance goals for each level ; the forecast/plan enabling managers at the various level of the business to more effectively manage and monitor their performance as well as their contribution to the overall business's performance (e.g. achievement of their objectives/goals).

14.   Regarding Claim 3 the phrases "district ratio calculating portion" and "district sales number portion" represent non-functional descriptive material since it is obvious in light of the prior art and to one skilled in the art that where (in what section, portion, subsystem routine, code, segment, object, etc.) the calculations are performed by the system or it's subsystems (components, sections, code, routines, etc.) does not change the overall functionality of the system.

Tenma et al. teach a profit management system and method wherein the system stores, calculates and analyzes a plurality of business information including but not limited to commodity sales for each level of a multi-level business as discussed above and further wherein the commodity (e.g. product mix, stocked items, etc.) consists of a plurality of unit goods (products, items, units, "unit products", etc.; Column 12, Lines 25-50; Column 13, Lines 48-53).

Tenma et al. does not expressly teach that the performance management system forecasts business metrics/values, acquires a ratio of the commodity sales number to a forecasted total number of visitors (e.g. average spending/purchase per customer) or calculates the total sales number for each commodity in a group of stores (e.g.

$TotalSales = avg\_CustomerPurchase * NoCustomers$) from the ratio and the forecasted total number of visitors as claimed and shown below:

$$ratio = \frac{(Com\bmod itySales)}{(Visitors\_GroupOfShops)}$$

$$Com\bmod itySales = f(ratio, Visitor\_GroupOfShops)$$

Singh et al. teach a sales forecasting system and method wherein members of the supply chain utilize promotional activities (Abstract), in an analogous art of business management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002).

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) in view of the teachings of

Singh et al.; the resultant system enabling businesses to more effectively plan and

manage their business by anticipating demand (e.g. forecasting sales and their impact

on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Lam teaches that average spending, the number of visitors to a store and store

sales are key performance metrics, in an analogous art of store performance

management, and that these performance metrics are calculated for the purposes of

understanding a stores performance as well as the impact of promotional activities on

store performance (Pages 21-23; Equations 1-3; Figure 2 as shown above).

Specifically Lam teaches the average spending (purchase, sales per customer)

is:

$$average\_spending = \frac{store\_sales}{number\_transactions}$$

or alternatively written, utilizing Lam's equations (1) and (2) as

$$ratio = \frac{(UnitSales)}{(Visitors / Traffic)}$$

Official notice is taken that the two calculations (equations) as claimed represent

a **single** equation/calculation wherein one can readily convert/transform from one form

of the equation into the other form of the equation utilizing basic mathematical

operations.

Official notice is taken that sales (commodity sales, store sales, etc.) can be

calculated using the following equation is old and well known, as evidenced by Pearce

(Pages 55-60; Figures 3.2-3.6)

$$UnitSales = ratio * Visitors\_GroupOfShops$$

It would have been obvious to one skilled in the art at the time of the invention

that the profit and performance management system, with its ability to collect, analyze,

forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as

taught by the combination of Tenma et al. and Singh et al.; would have benefited from

forecasting a plurality of business performance metrics (sales, demand, profit, etc.)

specifically determining the average purchase per customer/visitor and the total

commodity sales for a group of stores based on the average purchase per customer

and the forecasted number of customers in view of the teachings of Lam and official

notice; the resultant system enabling multi-level businesses to more efficiently plan and

manage the business strategies by enhancing the systems information to include

forecasted sales (demand) and profits (Tenma et al.: Column 3, Lines 55-60; Singh et

al.: Paragraph 0028).

15.   Regarding Claim 4, the phrase "district sales number calculating portion"

represents non-functional descriptive material since it is obvious in light of the prior art

and to one skilled in the art that where (in what section, portion, subsystem, routine,

code, segment, object, etc.) the calculations/operations are performed by the sales

forecasting system or it's subsystems (components, sections, code, routines, etc.) does

not change the overall functionality of the system.

        Tenma et al. teach a profit management system and method wherein the system

collects, stores, analyzes and reports on a plurality of historical (past) business data

(metrics, information, commodity sales, purchase price, etc; Column 4, Lines 35-42).

        Tenma et al. does not expressly teach that the business (e.g. retail chain and it

stores) engages in promotional activities or forecasts business metrics as claimed.

        Singh et al. teach a sales forecasting system and method, in an analogous art of

business performance management, for the purposes of proactively forecasting and

planning of sales/demand across multiple levels of a supply chain (multi-level business;

Paragraph 0002) wherein the forecasting of sales/demand is based on a plurality of

historical data streams/feeds (past achievement) that include promotional activities

(Paragraph 0048; Figure 2) i.e. forecasted sales are a function of historical data as

shown in the following equation:

$$ForecastedSales = f(historical\_data)$$

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) in view of the teachings of Singh et al.; the resultant system enabling businesses to more effectively plan and manage their business by anticipating demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Lam teaches the well-known use of marketing (promotions, advertising) in retail stores, in an analogous art of business management, for the purposes of analyzing the effects of promotional activities (signage, store layout, advertising, etc.) on store performance (e.g. profit; Pages 1, 5, 14) on store performance (profit, sales, traffic, etc.). Lam teaches that the importance and impact of promotional activities (e.g. a store, group of stores and/or businesses performing sales promotional activities via a plurality of advertising medium - television, newspaper, Internet, radio, billboard, etc.) on businesses is old, well-known and widely studied. Lam further teaches that the forecasting of store performance metrics (sales, traffic, volume, etc.) enables store managers to forecast/plan business activities such as staffing needs (Page 28).

It would have been obvious to one skilled at the time of the invention that the

profit management system and method, with its ability to collect, analyze, forecast and

report a plurality of business performance metrics, as taught by the combination of

Tenma et al. and Singh et al. would have benefited from including in its profit analysis

data related to the promotional activities of the multi-level business in view of the

teachings of Lam; the resultant system providing additional insight into the performance

and profit of the stores/business being analyzed as well as enhancing the data utilized

for business planning/management (Tenma et al.: Column 3, Lines 55-60).

16.   Regarding Claim 5 the computer-implemented commodity forecasting system as

claimed is merely **configured to** determine a forecast index, forecast ratio and forecast

sales, however the system does not actually perform the calculations/operations. For

the purposes of examination examiner assumes the applicant will amend the claim to

recite that system actually calculates a forecast index, forecast ratio and forecast sales.

Further the phrases "district purchasing trend forecasting section", "shop

purchasing trend forecasting section" and "shop commodity sales number calculating

section" represent non-functional descriptive material since it is obvious in light of the

prior art and to one skilled in the art that where (in what section, portion, subsystem

routine, code, segment, object, etc.) the calculations are performed by the sales

forecasting system or it's subsystems (components, sections, code, routines, etc.) does

not change the overall functionality of the system.

Tenma et al. teach a computer-implemented profit management system and method wherein the system acquires, calculates, stores and analyzes profit for each level (unit, division, district, store, organization, region, macro unit, geography, etc.) of a multi-level business, such as a retail chain, wherein the profit data includes commodity (product, item, unit, good, etc.) sales at each level of the business (e.g. for each shop/store in a group of shops within a predetermined district; Abstract; Columns 13-18; Figures 4, 9, 11-12, 16 and 18a-18c; Equations 2-6). Tenma et al. teach that profit and commodity sales are defined as (Column 4, Lines 1-15):

$$profit = com \bmod ity \_ sales - \cos ts$$

$$com \bmod ity \_ sales = sellingprice \_ product * no \_ products \_ sold$$

Tenma et al. further teaches the comparison of sales/profit of the products sold in order to identify "good sellers and bad sellers.", (Column 3, Lines 54-59).

Tenma et al. does not expressly teach that the business (e.g. retail chain and it stores) engages in promotional activities, forecasts business metrics, calculates a forecast index representing a customer's purchasing trend (e.g. average purchase per customer), calculating a forecast ratio of the forecast index for a shop to the forecast index of a group of shops (e.g. average purchase per customer at a shop divided by the average purchase per customer at a group of shops), calculating a commodity sales

number from (as a function of) the forecast index, forecast ratio and the forecasted

number of visitors/customers as claimed and shown below.

$$ForecastIndex\_GroupOfShops$$

$$ForecastRatio = \frac{(ForecastIndex\_Shop)}{(ForecastIndex\_GroupOfShops)}$$

$$Com\bmod itySales = f(ForecastIndex, ForecastRatio, Visitors\_Shop)$$

Singh et al. teach a sales forecasting method, in an analogous art of business

performance management, for the purposes of proactively forecasting and planning of

sales/demand across multiple levels of a supply chain (multi-level business; Paragraph

0002).

It would have been obvious to one skilled in the art at the time of the invention

that the profit management system, with its ability to collect, analyze and report on a

plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught

by Tenma et al.; would have benefited from forecasting a plurality of business

performance metrics (sales, demand, profit, etc.) in view of the teachings of Singh et al.;

the resultant system enabling business to more effectively plan and manage their

business by anticipating demand (e.g. forecasting sales and their impact on the

business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Lam teaches that average spending (i.e. forecast index representing a

customer's purchasing trend), the number of visitors to a store and store sales are key

performance metrics, in an analogous art of business performance management, and

that these performance metrics are calculated for the purposes of understanding a

store's performance as well as the impact of sales promotional activities on store

performance (Pages 21-23; Equations 1-3; Figure 2 as shown above).

Specifically Lam teaches the average spending (purchase, sales per customer)

is:

$$average\_spending = \frac{store\_sales}{number\_transactions}$$

or alternatively written, utilizing Lam's equations (1) and (2) as

$$ratio = \frac{(UnitSales)}{(Visitors\,/\,Traffic)}$$

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g. product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach calculating a forecast ratio of the forecast index for a shop to the forecast index of a group of shops (e.g. average purchase per customer at a shop divided by the average purchase per customer at a group of shops) or a commodity sales number from the forecast index, forecast ratio forecasted number of visitors/customers as claimed and shown above.

Official notice is taken that it is old and very well-known to calculate a ratio (forecast) wherein the ratio (proportion, percentage, index, fraction, etc.) compares the performance (past, present, future) of a part to a whole; more specifically the sales per customer (forecast index) of a specified part (e.g. a single store, group of stores, division, person, etc.) to the overall sales per customer (forecast index) of a business or group of businesses as evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit, Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business Segment or Unit Pages 35, 41-44); and

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

Official notice is taken that it is old and well known that commodity sales is a function of (can be calculated/determined from, is related to, etc.) the average purchase per customer (forecast index), the ratio of the average purchase per customer per store

to the average purchase per customer for a group of stores (forecast ratio) and the

forecasted number of visitors/customers as claimed and shown above.

It would have been obvious to one skilled in the art at the time of the invention

that the profit and performance management system, with its ability to collect, analyze,

forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as

taught by Tenma et al. and Singh et al.; would have benefited from forecasting business

performance a plurality of business performance metrics (sales, demand, profit, etc.)

specifically determining and comparing the average purchase per customer/visitor and

the total commodity sales for a group of stores based on the average purchase per

customer and the forecasted number of customers in view of the teachings of Lam and

official notice; the resultant system enabling the multi-level business to more effectively

plan and manage each level (store, shop, group, division, unit, district) of their business

by forecasting demand and setting business performance goals for each level; the

forecast/plan enabling managers at the various level of the business to more effectively

manage and monitor their performance as well as their contribution to the overall

business's performance (e.g. achievement of their objectives/goals).

17.   Regarding Claim 6 the phrase "shop purchasing trend forecasting section"

represents non-functional descriptive material since it is obvious in light of the prior art

and to one skilled in the art that where (in what section, portion, subsystem, routine,

code, segment, object, etc.) the calculations are performed by the sales forecasting

system or it's subsystems (components, sections, code, routines, etc.) does not change

the overall functionality of the system.

Tenma et al. teach a profit management system and method wherein the system

collects, analyzes, stores (historical sales/performance data) and reports on a plurality

of business performance metrics (commodity sales, profit, purchase price, etc.) for a

multi-level business as discussed above. Tenma et al. further teaches the comparison

of sales/profit of the products sold in order to identify "good sellers and bad sellers.",

(Column 3, Lines 54-59).

Tenma et al. does not expressly teach that the profit management system and

method forecasts business metrics or calculates a forecast ratio by comparing (visual

inspection, mathematical operation, artificial intelligence, etc.) a ratio of the forecasted

commodity sales to the forecasted number of visitors in an advertising district (group of

shops, unit, etc.) based on historical data (past achievements) and a ratio of the

forecasted commodity sales of a shop to the forecasted number of visitors (e.g. average

purchase price per customer) as claimed and as shown below.

$$ForecastRatio = f\left(\frac{(Com\,mod\,itySales\_GroupOfShops(historical))}{(Visitors)}, \frac{Com\,mod\,itySales\_Shop}{Visitors}\right)$$

Singh et al. teach a sales forecasting system and method, in an analogous art of

business management and planning, for the purposes of proactively forecasting and

planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002) based on historical data.

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) based on the collected historical business data in view of the teachings of Singh et al.; the resultant system enabling business to more effectively plan and manage their business by anticipating demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach the calculation of a forecast ratio as claimed and as shown above.

Lam teaches that average spending (i.e. forecast index/ratio representing a customer's purchasing trend), the number of visitors to a store and store sales are key performance metrics, in an analogous art of business performance management, and that these performance metrics are calculated for the purposes of understanding a stores performance as well as the impact of sales promotional activities on store

performance (e.g. profit, sales, store traffic, etc.; Pages 21-23; Equations 1-3; Figure 2 as shown above).

Additionally Lam teaches comparing the performance metrics of several stores for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g. product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach calculating a ratio (forecast ratio) by comparing a ratio of the forecasted commodity sales in an advertising district (group of shops, unit, etc.) based on historical data (past achievements) to the forecasted number of visitors and a ratio of the forecasted commodity sales of a shop to the forecasted number of visitors (e.g. average purchase price per customer) as claimed and as shown above.

Official notice is taken that it is old and very well-known to calculate a ratio (forecast ratio) wherein the ratio (proportion, percentage, index, fraction, etc.) compares the performance (past, present, future) of a part to a whole; more specifically the sales per customer (forecast index/ratio) of a specified part (e.g. a single store, group of stores, division, person, etc.) of a business to the overall sales per customer (forecast index/ratio) of a business, another part of the business or a group of businesses as evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit,

Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business

Segment or Unit Pages 35, 41-44); and

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

It would have been obvious to one skilled in the art at the time of the invention

that the profit and performance management system, with its ability to collect, analyze,

forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as

taught by Tenma et al. and Singh et al.; would have benefited from forecasting business

performance a plurality of business performance metrics (sales, demand, profit, etc.)

specifically comparing (forecast ratio) the average purchase per customer for a group of

stores (past, present, future) to the average purchase per customer for a store in view of

the teachings of Lam and official notice; the resultant system enabling multi-level

businesses more efficiently plan and manage the business strategies by enhancing the

systems information to include forecasted sales (demand) and profits (Tenma et al.:

Column 3, Lines 55-60; Singh et al.: Paragraph 0028) as well as enabling the multi-level

business to more effectively plan and manage each level (store, shop, group, division,

unit, district) of their business by forecasting demand and setting business performance

goals for each level; the forecast/plan enabling managers at the various level of the

business to more effectively manage and monitor their performance as well as their

contribution to the overall business's performance (e.g. achievement of their

objectives/goals).

18.   Regarding Claim 7 the phrase "shop purchasing trend forecasting section" represents non-functional descriptive material since it is obvious in light of the prior art and to one skilled in the art that where (in what section, portion, subsystem routine, code, segment, object, etc.) the calculations are performed by the sales forecasting system or it's subsystems (components, sections, code, routines, etc.) does not change the overall functionality of the system.

Tenma et al. teach a profit management system and method wherein the system collects, analyzes and reports on a plurality of historical business performance data (commodity sales, purchase price, etc.) as discussed above.

Tenma et al. does not expressly teach that the profit management system is forecasts business metrics or calculates a forecast index/ratio by referring to past achievement of commodity sales when performing promotional activities as claimed and as shown below.

$$ForecastIndex\_Shop = f(historical\_data)$$

Singh et al. teach a sales forecasting system and method, in an analogous art of business performance management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business;

Paragraph 0002) based on historical data and further wherein the historical data

includes promotional activities as discussed above.

It would have been obvious to one skilled in the art at the time of the invention

that the profit management system, with its ability to collect, analyze and report on a

plurality of business performance metrics (e.g. commodity sales, profits, etc.) based on

historical business data, as taught by Tenma et al.; would have benefited from

forecasting a plurality of business performance metrics (sales, demand, profit, historical

promotional activity, etc.) in view of the teachings of Singh et al.; the resultant system

enabling business to more effectively plan and manage their business by anticipating

demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column

3, Lines 55-60; Singh et al.: Paragraph 0028).

19.   Regarding Claim 8 Tenma et al. teach a profit management system and method

wherein the system collects, analyzes and reports on a plurality of historical

performance data (sales, purchase price, number of customers/transactions, etc.) as

discussed above.

Tenma et al. does not expressly teach that the profit management system

forecasts business metrics or calculates the forecasted number of visitors of a shop

based on (from) the forecasted shop sales and a forecasted average visitor purchase

(unit price) utilizing historical data (past achievement) as claimed and as shown below:

$$Visitors\_Shop = f(Com\bmod itySales\_Shop(historical\_data), AvgPurchase(historical\_data))$$

Singh et al. teach a sales forecasting system and method, in an analogous art of business management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002) based on historical data and further wherein the historical data includes promotional activities as discussed above.

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, historical promotional activity, etc.) in view of the teachings of Singh et al.; the resultant system enabling business to more effectively plan and manage their business by anticipating demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach the calculation of a the forecasted number of visitors of a shop as claimed and as shown above.

Lam teaches that average spending, the number of visitors to a store and store sales are key performance metrics, in an analogous art of store performance management, and that these performance metrics are calculated for the purposes of understanding a stores performance as well as the impact of sales promotional activities on store performance (e.g. profits, sales, store traffic, etc.; Pages 21-23; Equations 1-3; Figure 2 as shown above).

Specifically Lam teaches the average spending (purchase, sales per customer) is:

$$average\_spending = \frac{store\_sales}{number\_transactions}$$

or alternatively written, utilizing Lam's equations (1) and (2) as

$$ratio = \frac{(UnitSales)}{(Visitors / Traffic)}$$

Official notice is taken that the Lam's equations can readily utilized to calculate/determine the number of visitors to a store or group of stores utilizing the average spending (price, purchase) per customer and the total sales and further that determining the number of visitors to a store based on the average spending per customer and store sales is old and very well-known as evidenced by:

    - Tucker, Handbook of business formulas and controls (1979; Segmental Profit,
Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business
Segment or Unit Pages 35, 41-44); and

    - Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

The forecasted number of visitors (store traffic) enables businesses to plan
staffing, inventory and other resource requirements in anticipation of the forecasted
sales and number of customers.

It would have been obvious to one skilled in the art at the time of the invention
that the profit management system, with its ability to collect, analyze, forecast and
report on a plurality of business performance metrics (e.g. commodity sales, profits,
etc.), as taught by the combination of Tenma et al. and Singh et al.; would have
benefited from forecasting a plurality of business performance metrics (sales, demand,
profit, etc.) including the calculation of the number of visitors based on average
purchase per customer and store sales; the resultant system enabling a multi-level
business to more effectively plan and manage each level (store, shop, group, division,
unit, district) of their business by forecasting store traffic.

20.   Regarding Claim 9 Tenma et al. teach a profit management system and method
wherein the system collects, analyzing and reports on a plurality of business
performance metrics/information (data, values, numbers, etc.) including but not limited

to: number of products sold, product purchase price, commodity sales, point of sales

transactions and the like. Tenma et al. further teach that the system's profit analysis is

conducted for all levels (districts, groups, sections, portions, etc.) of a multi-level

business including but not limited to: the entire business (headquarters), a group of

stores, individual stores, individual store sections, departments, organizations, etc.

(Abstract; Column 1, Lines 13-27; Column 2, Lines 55-67; Figures 2, 4, 18a-18c as

shown above).

Tenma et al. more specifically teaches the calculation of the total commodity

sales for each of the plurality of levels in the multi-level business based on historical

performance (past achievement) data (Column 4, Lines 35-40).

Tenma et al. does not expressly teach that the profit management system and

method forecasts business metrics, calculates a forecasted total commodity sales for a

group of shops (district), calculates a forecast ratio of the forecasted commodity sales

per visitor in a unit (one shop, group of shops, etc.; e.g. average purchase per

customer) to a forecasted commodity sales per visitor in a group of shops (district), or

calculates a forecasted total commodity sales within a unit (unit district, advertising unit,

one shop, group of shops, etc.) using the forecasted total commodity sales for a group

of shops and forecast ratio as claimed and as shown below:

$$TotalCom\mod itySales \_ GroupOfShops$$

$$ForecastRatio = \frac{\left(\dfrac{Com\,mod\,itySales\_Unit}{Visitors\_Unit}\right)}{\left(\dfrac{Com\,mod\,itySales\_GroupOfShops}{Visitors\_GroupOfShops}\right)}$$

$$Total\_Com\,mod\,itySales\_Unit = f(TotalCom\,mod\,itySales\_GroupOfShops, ForecastRatio)$$

Singh et al. teach a sales forecasting system and method wherein members of the supply chain (multi-level business) utilize promotional activities (Abstract), in an analogous art of business performance management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002). More specifically Singh et al. teach forecasting the total sales for the multi-level business (e.g. total commodity sales for a group of shops) as discussed above.

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) including but not limited to the forecasted total commodity sales in view of the teachings of Singh et al.; the resultant system enabling business to more effectively plan and manage their business by anticipating demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach calculating a forecast ratio or forecasted

total commodity sales of a unit district based on a forecasted total sales number of a

predetermined district and the forecast ratio as claimed and shown above.

Lam teaches that average spending, the number of visitors to a store and store

sales are key performance metrics, in an analogous art of store performance

management, and that these performance metrics are calculated for the purposes of

understanding a stores performance as well as the impact of sales promotional activities

on store performance (Pages 21-23; Equations 1-3; Figure 2 as shown above).

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g.

product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach

calculating a ratio (forecast ratio) of the average purchase per customer in a unit district

to an average purchase per customer in a predetermined district as claimed and shown

above.

Official notice is taken that it is old and very well-known to calculate a ratio

(forecast ratio) wherein the ratio (proportion, percentage, index, fraction, etc.) compares

the performance (past, present, future) of a part to a whole or to another part of a

business; more specifically the sales per customer (forecast index) of a specified part

(e.g. a single store, group of stores, division, person, etc.) to the sales per customer

(forecast index) of another specified part of a business or group of businesses as

evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit,

Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business

Segment or Unit Pages 35, 41-44); and

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

Official notice is taken that the two calculations (equations) as claimed represent

a **single** equation/calculation wherein one can readily convert/transform from one form

of the equation into the other form of the equation utilizing basic mathematical

operations (division and multiplying) as shown below:

$$\left(TotalCom\bmod itySales\_ForGroupOfShops\right) = \frac{\left(TotalCom\bmod itySales\_Unit\right)}{ForecastRatio}$$

alternatively written as:

$$Com\bmod itySales\_ForGroupOfShops = f(TotalCom\bmod itySales\_ForAShop, SalesRatio)$$

i.e. the function calculates the forecasted commodity sales (number, figure,

amount, etc.) for a group of shops (unit district) using the total commodity sales per

shop within a predetermined district and a forecast ratio.

It would have been obvious to one skilled in the art at the time of the invention that the profit and performance management system, with its collect, analyze, forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as taught by Tenma et al. and Singh et al.; would have benefited from forecasting business performance a plurality of business performance metrics (sales, demand, profit, etc.) as well as comparing the performance of one or more specified business units/groups by calculating a ratio of (forecast ratio) the average purchase per customer for a unit district (e.g. group of stores) to the average purchase per customer for a stores in a predetermined district as well as calculating the forecasted total commodity sales based on the number of visitors and the forecast ratio in view of the teachings of Lam and official notice; the resultant system enabling multi-level businesses more efficiently plan and manage the business strategies by enhancing the systems information to include forecasted sales (demand) and profits (Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028) as well as enabling the multi-level business to more effectively plan and manage each level (store, shop, group, division, unit, district) of their business by forecasting demand and setting business performance goals for each level; the forecast/plan enabling managers at the various level of the business to more effectively manage and monitor their performance as well as their contribution to the overall business's performance (e.g. achievement of their objectives/goals).

21.   Regarding Claim 10 Tenma et al. does not expressly teach that the multi-level

business performs promotional activities as claimed.

Singh et al. teach a sales/demand forecasting method wherein members of the

supply chain utilize promotional activities (Abstract), in an analogous art of business

performance management, for the purposes of proactively forecasting and planning of

sales/demand across multiple levels of a supply chain (multi-level business; Paragraph

0002).

It would have been obvious to one skilled in the art at the time of the invention

that the profit management system, with its ability to collect, analyze and report on a

plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught

by Tenma et al.; would have benefited from forecasting a plurality of business

performance metrics (sales, demand, profit, etc.) in view of the teachings of Singh et al.;

the resultant system enabling business to more effectively plan and manage their

business by anticipating demand (e.g. forecasting sales and their impact on the

business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Lam teaches the well-known use of marketing (promotions, advertising) in retail

stores, in an analogous art of store/business management, for the purposes of

analyzing the effects of promotional activities (signage, store layout, advertising, etc.) on

store performance (e.g. profit, sales, store traffic; Pages 1, 5, 14). Lam teaches that the

importance and impact of promotional activities (e.g. a store, group of stores and/or

businesses performing sales promotional activities via a plurality of advertising medium

- television, newspaper, Internet, radio, billboard, etc.) on businesses is old, well-known

and widely studied. Lam further teaches that the forecasting of store performance

metrics (sales, traffic, volume, etc.) enables store managers to forecast/plan business

activities such as staffing needs (Page 28).

It would have been obvious to one skilled at the time of the invention that the

profit management system and method, with its ability to collect, analyze, forecast and

report on a plurality of business performance metrics, as taught by the combination of

Tenma et al. and Singh et al. would have benefited from including in its profit analysis

and forecasts data related to the promotional activities of the plurality of stores, groups

of stores and/or an entire business in view of the teachings of Lam; the resultant system

providing additional insight into the performance and profit of the stores/business being

analyzed as well as enhancing the data utilized for business planning/management

(Tenma et al.: Column 3, Lines 55-60).

22.   Regarding Claim 11 Tenma et al. teach a profit management system wherein a

plurality of performance/business historical information/data (profits, commodity sales,

etc.) for level (group, division, macro unit, store, shop, organization, etc.) is stored and

accessed from a plurality of databases (data stores, storage medium, file, memory, etc.)

and used as the basis for the calculation (i.e. analysis) of a plurality of business

performance metrics including but not limited to commodity sales for each level during a

past term (period of time) for a multi-level business as discussed above.

Tenma et al. does not expressly teach that the profit management system

forecasts business metrics or calculates the forecasted total commodity sales for a

district based on historical data (reading past/historical commodity sales in the district

from the storage device and calculating the forecasted total commodity sales for a

district based on the historical data read) as claimed and as shown below.

$$Com\mod itySales\_GroupOfShops = f(Com\mod itySales\_GroupOfShops(historical\_data))$$

Singh et al. teach the forecasting of commodity sales and other business

performance data (i.e. supply chain sales/demand forecasting and planning) based on

historical data, in an analogous art of business performance management, for the

purposes of proactively forecasting and planning of sales/demand across multiple levels

of a supply chain (multi-level business; Paragraph 0002).

It would have been obvious to one skilled in the art at the time of the invention

that the profit management system, with its ability to collect, analyze and report on a

plurality of historical business performance metrics (e.g. commodity sales, profits, etc.),

as taught by Tenma et al.; would have benefited from forecasting a plurality of business

performance metrics (sales, demand, profit, etc.) based on historical data including but

not limited to forecasting commodity sales using historical data, in view of the teachings

of Singh et al.; the resultant system enabling business to more effectively plan and

manage their business by anticipating demand (e.g. forecasting sales and their impact

on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

23.   Regarding Claim 12 Tenma et al. teach a profit management system and method

wherein historical (past) business performance data is collected, stored (in a plurality of

databases), accessed/red, analyzed and reported on as discussed above.

Tenma et al. does not expressly teach that the profit management system and

method forecasts business metrics or that the system calculates a forecast ratio

(average sales per customer for a unit district to the average sales per customer for a

predetermined district) further comprises reading data of the ratio of the commodity

sales per visitor in a unit to the commodity sales per visitor in a group of shops

(predetermined district) using historical data as claimed and shown below.

$$ForecastRatio = \frac{\left(\dfrac{Com\,\mathrm{mod}\,itySales\_Unit(historical\_data)}{Visitors\_Unit(historical\_data)}\right)}{\left(\dfrac{Com\,\mathrm{mod}\,itySales\_GroupOfShops(historical\_data)}{Visitors\_GroupOfShops(historical\_data)}\right)}$$

Singh et al. teach the forecasting of commodity sales and other business

performance data (i.e. supply chain sales/demand forecasting and planning) based on

historical data, in an analogous art of business management, for the purposes of

proactively forecasting and planning of sales/demand across multiple levels of a supply

chain (multi-level business; Paragraph 0002).

It would have been obvious to one skilled in the art at the time of the invention

that the profit management system, with its ability to collect, analyze and report on a

plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught

by Tenma et al.; would have benefited from forecasting a plurality of business

performance metrics (sales, demand, profit, etc.) based on historical data including but

not limited to forecasting commodity sales using historical data, in view of the teachings

of Singh et al.; the resultant system enabling business to more effectively plan and

manage their business by anticipating demand (e.g. forecasting sales and their impact

on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach calculation of a forecast ratio (average

sales per customer for a unit district to the average sales per customer for a

predetermined district) as claimed.

Lam teaches that average spending, the number of visitors to a store and store

sales are key performance metrics, in an analogous art of store performance

management, and that these performance metrics are calculated for the purposes of

understanding a stores performance as well as the impact of sales promotional activities

on store performance (Pages 21-23; Equations 1-3; Figure 2 as shown above).

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g.

product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach

calculating a ratio (forecast ratio) of the average purchase per customer in a unit district

to an average purchase per customer in a predetermined district as claimed and shown

above.

Official notice is taken that it is old and very well-known to calculate a ratio

(forecast ratio) wherein the ratio (proportion, percentage, index, fraction, etc.) compares

the performance (past, present, future) of a part to a whole or to another part of a

business; more specifically the sales per customer (forecast index) of a specified part

(e.g. a single store, group of stores, division, person, etc.) to the sales per customer

(forecast index) of another specified part of a business or group of businesses as

evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit,

Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business

Segment or Unit Pages 35, 41-44); and

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

It would have been obvious to one skilled in the art at the time of the invention that the profit and performance management system, with its collect, analyze, forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as taught by Tenma et al. and Singh et al.; would have benefited from forecasting business performance a plurality of business performance metrics (sales, demand, profit, etc.) as well as comparing the performance of one or more specified business units/groups by calculating a ratio of (forecast ratio) the average purchase per customer for a unit district (e.g. group of stores) to the average purchase per customer for a stores in a predetermined district as well as calculating the forecasted total commodity sales based on the number of visitors and the forecast ratio in view of the teachings of Lam and official notice; the resultant system enabling multi-level businesses more efficiently plan and manage the business strategies by enhancing the systems information to include forecasted sales (demand) and profits (Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028) as well as enabling the multi-level business to more effectively plan and manage each level (store, shop, group, division, unit, district) of their business by forecasting demand and setting business performance goals for each level; the forecast/plan enabling managers at the various level of the business to more effectively manage and monitor their performance as well as their contribution to the overall business's performance (e.g. achievement of their objectives/goals).

24.   Regarding Claim 13 the computer program product for commodity sales forecasting as claimed is merely **configured to** determine and/or collect a forecast ratio and a forecast value but does not actually perform the calculations or collection/acquisition of that data. For the purposes of examination examiner assumes the applicant will amend the claim to recite that system actually calculates and collects a forecast ratio and a forecast value.

Further the phrases "first unit", "second unit" and "third unit" represent non-functional descriptive material since it is obvious in light of the prior art and to one skilled in the art that where (in what section, portion, subsystem routine, code, segment, object, etc.) the calculations are performed by the sales forecasting system or it's subsystems (components, sections, code, routines, etc.) does not change the overall functionality of the system.

Tenma et al. teach a profit management system and method wherein the system collects, analyzing and reports on a plurality of business performance metrics/information (data, values, numbers, etc.) including but not limited to: number of products sold, product purchase price, commodity sales and the like to various levels of management and further wherein the profit analysis is conducted for all levels (districts, groups, sections, portions, etc.) of a multi-level business including but not limited to the entire business (headquarters), a group of stores, individual stores, individual store sections and the like (Abstract; Column 1, Lines 13-27; Column 2, Lines 55-67; Figures 2, 4, 18a-18c as shown above).

Tenma et al. more specifically teaches the calculation of the total commodity

sales for each of the plurality of levels in the multi-level business based on historical

performance (past achievement) data as discussed above.

Tenma et al. does not expressly teach that the profit management system and

method forecasts business metrics, calculates a forecast ratio of the commodity sales

(selling) index at a shop (e.g. average sales per customer for a shop) to the commodity

sales index of a unit district to which the shop belongs (group of shops; e.g. average

sales per customer for a group of shops), acquiring (collecting, retrieving, etc.) a

forecast value of the commodity sales index at a shop, calculates a forecast value of the

commodity sales index at a shop from the forecast value of the acquired forecast value

of the commodity sales index at a shop and the calculated forecast ratio, or calculates

the forecasted commodity sales of the shop based on the forecast value as claimed and

shown below:

$$ForecastRatio = \frac{Com \bmod itySalesIndex\_Shop}{Com \bmod itySalesIndex\_GroupOfShops}$$

$$Com \bmod itySales\_Shop_{acquired}$$

$$Com \bmod itySalesIndex\_Shop = f(Com \bmod itySales\_Shop_{acquired}, ForecastRatio)$$

$$Com\,mod\,itySales\_Shop = f(Com\,mod\,itySalesIndex\_Shop)$$

Singh et al. teach a sales forecasting system and method wherein members of the supply chain utilize promotional activities (Abstract), in an analogous art of business performance management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002). More specifically Singh et al. teach forecasting the total sales for the multi-level business (e.g. total commodity sales for a group of shops) as discussed above.

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) including but not limited to the forecasted total commodity sales in view of the teachings of Singh et al.; the resultant system enabling business to more effectively plan and manage their business by anticipating demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach calculating a forecast ratio, acquiring a forecast value of a commodity selling index or calculating a forecast value of the commodity selling index using the acquired forecast value and the forecast ratio or

calculating forecasted commodity sales based on the forecast value as claimed and

shown above.

Lam teaches that average spending, the number of visitors to a store and store

sales are key performance metrics, in an analogous art of store performance

management, and that these performance measurements are calculated for the

purposes of understanding a stores performance as well as the impact of sales

promotional activities on store performance (Pages 21-23; Equations 1-3; Figure 2 as

shown above).

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g.

product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach

calculating a ratio (forecast ratio) of the average purchase per customer in a unit district

to an average purchase per customer in a predetermined district as claimed and shown

above.

Official notice is taken that it is old and very well-known to calculate a ratio

(forecast ratio, proportion, percentage, index, fraction, etc.) for the purposes of

comparing the performance (past, present, future) of a part to a whole; i.e. to compare

one part of a business or to another part of a business or group of businesses such as

comparing the specifically the sales per customer (forecast index/ratio) of a specified

part (e.g. a single store, group of stores, division, person, etc.) to the sales per customer

(forecast index/ratio) of another specified part of a business or group of businesses as

evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit,

Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business

Segment or Unit Pages 35, 41-44); and

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

Official notice is taken that the two calculations (equations) as claimed represent

a **single** equation/calculation wherein one can readily convert/transform from one form

of the equation into the other form of the equation utilizing basic mathematical

operations (division and multiplying) as shown below:

$$(TotalCom\bmod itySales\_ForGroupOfShops) = \frac{(TotalCom\bmod itySales\_Unit)}{ForecastRatio}$$

alternatively written as:

$$Com\bmod itySales\_ForGroupOfShops = f(TotalCom\bmod itySales\_ForAShop, SalesRatio)$$

i.e. the function calculates the forecasted commodity sales (number, figure,

amount, etc.) for a group of shops (unit district) using the total commodity sales per

shop within a predetermined district and the forecast ratio.

It would have been obvious to one skilled in the art at the time of the invention that the profit and performance management system, with its collect, analyze, forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as taught by Tenma et al. and Singh et al.; would have benefited from forecasting business performance a plurality of business performance metrics (sales, demand, profit, etc.) as well as comparing the performance of a one or more groups (units, districts, regions, etc.) within a business by calculating a ratio of (forecast ratio/index) the average purchase per customer for a unit district (e.g. group of stores) to the average purchase per customer for a stores in a predetermined district as well as calculating the forecasted total commodity sales based on the number of visitors and the forecast ratio in view of the teachings of Lam and official notice; the resultant system enabling multi-level businesses more efficiently plan and manage the business strategies by enhancing the systems information to include forecasted sales (demand) and profits (Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028) as well as enabling the multi-level business to more effectively plan and manage each level (store, shop, group, division, unit, district) of their business by forecasting demand and setting business performance goals for each level; the forecast/plan enabling managers at the various level of the business to more effectively manage and monitor their performance as well as their contribution to the overall business's performance (e.g. achievement of their objectives/goals).

25.   Regarding Claim 14 Tenma et al. does not expressly teach the calculation of the

commodity selling (sales) index (ratio; average purchase per customer) as claimed and

shown below:

$$Com\,mod\,itySalesIndex\_Shop = \frac{Com\,mod\,itySales\_Shop}{Visitors}$$

Lam teaches that average spending, the number of visitors to a store and store

sales are key performance metrics, in an analogous art of store performance

management, and that these performance measurements are calculated for the

purposes of understanding a stores performance as well as the impact of sales

promotional activities on store performance (Pages 21-23; Equations 1-3; Figure 2 as

shown above).

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g.

product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach

calculating a ratio (forecast ratio) of the average purchase per customer in a unit district

to an average purchase per customer in a predetermined district as claimed and shown

above.

Official notice is taken that it is old and very well-known to calculate a ratio (forecast ratio, proportion, percentage, index, fraction, etc.) for the purposes of comparing the performance (past, present, future) of a part to a whole; i.e. to compare one part of a business or to another part of a business or group of businesses such as comparing the specifically the sales per customer (forecast index/ratio) of a specified part (e.g. a single store, group of stores, division, person, etc.) to the sales per customer (forecast index/ratio) of another specified part of a business or group of businesses as evidenced by:

- Tucker, Handbook of business formulas and controls (1979; Segmental Profit, Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business Segment or Unit Pages 35, 41-44); and

- Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

It would have been obvious to one skilled in the art at the time of the invention that the profit and performance management system, with its collect, analyze, forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as taught by Tenma et al. and Singh et al.; would have benefited from forecasting business performance a plurality of business performance metrics (sales, demand, profit, etc.) as well as comparing the performance of a one or more groups (units, districts, regions, etc.) within a business by calculating a ratio of (forecast ratio/index) the average purchase per customer for a unit district (e.g. group of stores) to the average purchase per customer for a stores in a predetermined district as well as calculating the

forecasted total commodity sales based on the number of visitors and the forecast ratio

in view of the teachings of Lam and official notice; the resultant system enabling multi-

level businesses more efficiently plan and manage the business strategies by

enhancing the systems information to include forecasted sales (demand) and profits

(Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028) as well as enabling

the multi-level business to more effectively plan and manage each level (store, shop,

group, division, unit, district) of their business by forecasting demand and setting

business performance goals for each level; the forecast/plan enabling managers at the

various level of the business to more effectively manage and monitor their performance

as well as their contribution to the overall business's performance (e.g. achievement of

their objectives/goals).

26.   Regarding Claim 15 the computer program product for commodity sales

forecasting system as claimed is merely **configured to** determine, display and calculate

a selling index and **configured to** enable the modification of the calculated result but

does not actually perform the display, modification or calculation operations as claimed.

For the purposes of examination examiner assumes the applicant will amend the claim

to recite that system actually performs the display, modification or calculation operations

as claimed.

Tenma et al. teach a profit management system and method wherein the system

collects, stores, analyzes, displays and reports a plurality of business performance

information (commodity sales, profit, etc.) for each level (group, unit, division, organization) of a multi-level business as discussed above. More specifically Tenma et al. teach a graphical user interface for interacting with the user of the system (i.e. displaying information, receiving commands, data, input and the like; Columns 19-21, Figures 15a, 18a-18c).

Tenma et al. does not expressly teach the calculation or subsequent display of the commodity selling index (e.g. average sales per customer) or enabling the user to modify the calculated results.

Singh et al. teach a graphical user interface for interacting with the user, displaying a plurality of forecasted sales/demand and enabling the user to modify (update, override) a plurality of calculated results (Paragraph 0081, Figure 6, Element 605), in an analogous art of business management, for the purposes enabling the user to override (adjust, update, modify, edit) errant data that would skew the sales/demand forecasts (Paragraphs 0081, 0101-0103; Figures 3, 4a-4d).

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with graphical user interface and its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) such as the

forecasted total commodity sales and enabling users to override errant data that would

skew the calculated forecasts in view of the teachings of Singh et al.; the resultant

system enabling business to more effectively and accurately (e.g. by the removal of

errant data) plan and manage their business by anticipating demand (e.g. forecasting

sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et

al.: Paragraph 0028).

Singh et al. does not expressly teach the calculation of the commodity selling

index as claimed and shown above.

Lam teaches that average spending (commodity selling index), the number of

visitors to a store and store sales are key performance metrics, in an analogous art of

store performance management, and that these performance measurements are

calculated for the purposes of understanding a stores performance as well as the

impact of sales promotional activities on store performance (Pages 21-23; Equations 1-

3; Figure 2 as shown above).

Additionally Lam teaches comparing the performance metrics of several stores

for benchmarking retail/store performance (Page 93).

It would have been obvious to one skilled in the art at the time of the invention

that the profit and performance management system, with its collect, analyze, forecast

and report on a plurality of business metrics (commodity sales, profit, etc.), as taught by

Tenma et al. and Singh et al.; would have benefited from forecasting business

performance a plurality of business performance metrics (sales, demand, profit, etc.)

including calculating the average purchase per customer (commodity selling index) in

view of the teachings of Lam and official notice; the resultant system enabling multi-

level businesses more efficiently plan and manage the business strategies by

enhancing the systems information to include forecasted sales (demand) and profits

(Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

27.   Regarding Claim 16 Tenma et al. teach a profit management system and method

wherein a plurality of historical business metrics (sales, purchases, etc.) are collected,

stored, analyzed and reported on as discussed above.

Tenma et al. does not expressly teach that the profit management system

forecasts business metrics, calculates a forecast ratio based on historical data for a

predetermined commodity or commodity similar to the predetermined commodity and an

achievement ratio of the commodity selling index (e.g. average purchase per customer)

at a shop to the commodity selling index to a group of shops as claimed and shown

below:

$$AchievementRatio = \frac{Com \bmod itySalesIndex\_Shop}{Com \bmod itySalesIndex\_GroupOfShops}$$

Singh et al. teach a sales forecasting system and method wherein members of the supply chain (multi-level business) utilize promotional activities (Abstract), in an analogous art of business performance management, for the purposes of proactively forecasting and planning of sales/demand across multiple levels of a supply chain (multi-level business; Paragraph 0002). More specifically Singh et al. teach forecasting the total sales for the multi-level business (e.g. total commodity sales for a group of shops) as discussed above.

It would have been obvious to one skilled in the art at the time of the invention that the profit management system, with its ability to collect, analyze and report on a plurality of business performance metrics (e.g. commodity sales, profits, etc.), as taught by Tenma et al.; would have benefited from forecasting a plurality of business performance metrics (sales, demand, profit, etc.) including but not limited to the forecasted total commodity sales in view of the teachings of Singh et al.; the resultant system enabling business to more effectively plan and manage their business by anticipating demand (e.g. forecasting sales and their impact on the business; Tenma et al.: Column 3, Lines 55-60; Singh et al.: Paragraph 0028).

Singh et al. does not expressly teach calculating a forecast ratio or achievement ratio as claimed and shown above.

Lam teaches that average spending, the number of visitors to a store and store sales are key performance metrics, in an analogous art of store performance management, and that these performance metrics are calculated for the purposes of understanding a stores performance as well as the impact of sales promotional activities on store performance (Pages 21-23; Equations 1-3; Figure 2 as shown above).

Additionally Lam teaches comparing the performance metrics of several stores for benchmarking retail/store performance (Page 93).

While both Tenma et al. and Lam teach the comparison of sales/profit data (e.g. product sales, store performance, etc.) neither Tenma et al. nor Lam expressly teach calculating a ratio (forecast ratio, achievement ratio) utilizing the average purchase per customer for a shop to an average purchase per customer in a predetermined group of shops as claimed and shown above.

Official notice is taken that it is old and very well-known to calculate a ratio (forecast ratio) wherein the ratio (proportion, percentage, index, fraction, etc.) compares the performance (past, present, future) of a part to a whole or to another part of a business; more specifically the sales per customer (forecast index, achievement ratio) of a predetermined commodity in a specified store to the sales per customer (forecast index, achievement ratio) of a specified commodity in another specified part of a business or group of businesses as evidenced by:

    - Tucker, Handbook of business formulas and controls (1979; Segmental Profit, Profit of a Sales Office, Profit of a Business Segment, Contribution of a Business Segment or Unit Pages 35, 41-44); and

    - Pearce, Retail Marketing Management (1992; Pages 53, 70-75).

Official notice is taken that using data from similar products (commodities) to forecast/predict/estimate business metrics related to a commodity is old and well know. For example when introducing a new product to the market businesses frequently use historical data from similar products in order to predict things such as sales, customer response and the like.   This information is vital to planning the product's launch and since there is no data available on the new product (since it has never been introduced before) the use of similar products helps business to more accurately model the new product's performance.

It would have been obvious to one skilled in the art at the time of the invention that the profit and performance management system, with its collect, analyze, forecast and report on a plurality of business metrics (commodity sales, profit, etc.), as taught by Tenma et al. and Singh et al.; would have benefited from forecasting business performance a plurality of business performance metrics (sales, demand, profit, etc.), comparing the forecasted performance (e.g. average sales per customer per location) of a particular product based on historical data for that product or similar products and comparing the performance of one or more specified business units/groups and/or products by calculating a ratio of (forecast ratio, achievement ratio) the average

purchase per customer for a shop to the average purchase per customer for a group of

stores (district as well as calculating the forecasted total commodity sales based on the

number of visitors and the forecast ratio in view of the teachings of Lam and official

notice; the resultant system enabling multi-level businesses more efficiently plan and

manage the business strategies by enhancing the systems information to include

forecasted sales (demand) and profits (Tenma et al.: Column 3, Lines 55-60; Singh et

al.: Paragraph 0028) as well as enabling the multi-level business to more effectively

plan and manage each level (store, shop, group, division, unit, district) of their business

by forecasting demand and setting business performance goals for each level; the

forecast/plan enabling managers at the various level of the business to more effectively

manage and monitor their performance as well as their contribution to the overall

business's performance (e.g. achievement of their objectives/goals).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Von Kohorn, Henry, U.S. Patent No. 5,527,874, teaches method and system for quantifying the effects of promotional and advertising activities, specifically the impact of broadcast (television, radio) and print advertising.

- Weinblatt, Less S., U.S. Patent No. 5,515,270, teaches a system and method for correlating/associating the effect of advertisements and promotions (e.g. television commercials) on sales.

- Fox et al., U.S. Patent No. 5,521,813, teach a method and system for forecasting/predicting sales in a multi-level business (e.g. retail store chain) wherein the system is used to predict future sales, sales/product volumes and other business performance metrics based on a plurality of historical information/data (e.g. performance, achievement, transactions, sales, store traffic, promotions, weather, etc.).

- Fox et al., U.S. Patent No., 5,832,456, teach a method and system for forecasting business performance. Fox et al. further teaches the history of retailing information systems, their use in managing multi-level retail chains/stores wherein data is aggregated (sales, store traffic, demographics, orders, etc.) from the plurality of locations and manipulated into regional and national performance reports. Fox et al. further teaches that sales forecasts are a vital component in the management of a business (e.g. inventory management).

- Hoffman et al., U.S. Patent Publication No. 2003/0018513, teach a system and

method for benchmarking in a supply chain where in the system comprises a plurality of

subsystems including but not limited to a sales forecasting and inventory management

subsystem. Hoffman et al. further teaches that the system forecasts sales for each of

the plurality of entities in the supply chain (e.g. franchisees, distributors, plurality of

stores, etc.) as well as geographic regions based on historical sales information wherein

the stores are conducting promotional activities and that this information is used to

benchmark/compare the entities performance.

- Fox, Edward, U.S. Patent Publication No. 2003/0028417, teach a method and

system for evaluating business performance across a plurality of retail locations based

on forecasted sales wherein the forecasted sales are a function of the average

purchase price and the forecasted number of visitors (customers)

- Eltchaninoff et al., U.S. Patent Publication No. 2003/0055712, teach an Internet

based system and method for demand chain management wherein the system

forecasts sales/demand in a multi-store business utilizing historical performance data.

Eltchaninoff et al. further teach that the system is utilized for performance analysis

utilizing a plurality of sales metrics.

- Pearce, Michael, Retail Marketing Management, teaches well-known tools,

methods, techniques and the like for retail marketing management. Pearce further

teaches the well-known methods, formulas, tools, etc. for measuring and analyzing the

performance of businesses at the operations (multiple stores, locations, divisions,

departments, marketplace, competitors, etc.) and merchandising (product, services,

etc.) levels wherein retail performance metrics include but are not limited to: store traffic, purchase yield rate, average transaction size, number of customers/visitors, sales revenue (sales = no. customers * no. transactions * average dollars per transaction), profit, return on investment and the like.

- Mason, Barry et al., Modern Retailing, teach well-known retailing management methods, tools and techniques including but not limited to financial planning, key financial ratios (i.e. performance measurement), profit by department (district, division, product, etc.) and the like.

- Anderson et al., Quantitative Methods for Business, teach a plurality of well-known business management methods, tools and techniques including but not limited to forecasting (e.g. sales forecasting).

- Tucker, Spencer, Handbook of Business Formulas and Controls, teaches a plurality of well know formulas, ratios, tools, techniques and the like commonly used in the management of a business.   Specifically Tucker teaches the determination of sales revenue and profits/sales contributions by individual, store, group, region, office and the like.

- Roueche, Nelda, Business Mathematics, teaches well-known mathematical tools, formulas, techniques and approaches commonly utilized in the management of businesses (e.g. average price per transaction/store, ratios, proportions, etc).

- Winning Retail, teaches a plurality of well-known tools, techniques and approaches for successfully managing retail stores including detailed discussions on

sales management and performance evaluation (e.g. conversion rate, average sale, store traffic, etc.).

- Mulhern, Francis et al., Retail promotional advertising, teaches the utilization of price promotions to drive retail chain and store sales (i.e. "boost store sales and profit and generate store traffic") and the effect those promotional activities have on store performance (e.g. total chain sales, total chain traffic, store traffic, store sales, etc.).

- Lam, Shunyin et al., Retail Sales Force Scheduling Based on Store Traffic Forecasting, teach a method for determining forecasted sales as a function of store traffic and sales wherein the forecasts are utilized to determine the most effective staff size to maximize store performance (e.g. profits).

- Walters, Rockney et al., An Empirical Investigation into the Impact of Price Promotions on Retail Store Performance, teaches the impact of well-known promotional activities (e.g. television commercials) on store performance wherein store performance is a function of sales, traffic and profitability.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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SJ
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TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600